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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,193	11/04/2003	Osamu Kurosawa	8305-234US (NP61-0002-1)	6237
570 7590 09/19/2007 AKIN GUMP STRAUSS HAUER & FELD L.L.P. ONE COMMERCE SQUARE 2005 MARKET STREET, SUITE 2200 PHILADELPHIA, PA 19103			EXAMINER LANG, AMY T	
			ART UNIT 3731	PAPER NUMBER
			MAIL DATE 09/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/701,193

Applicant(s)

KUROSAWA ET AL.

Examiner

Amy T. Lang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Objections

1. **Claims 1 and 2** are objected to because of the following informalities: the instantly claimed kinematic viscosity of the composition does not define at which temperature the viscosity was measured. It is the examiner's position that the temperature should be 100 degrees Celsius in view of page 5 of the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tersigni (US 6,482,778 B2) in view of Komiya (US 2001/0044389 A1) and further in view of Yagishita (US 2004/0242434 A1).

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Tersigni discloses a transmission fluid composition comprised of base oil and a phosphorus-containing additive (column 1, lines 8-13; column 2, lines 1-4). The base oil is disclosed as a mineral oil, including paraffinic and naphthenic mineral oils, with a kinematic viscosity of 3 to 8 centistokes at 100 degrees Celsius (column 12, lines 9-18). Since centistokes is equivalent to mm^2/s , this viscosity range clearly overlaps the instant claims. Tersigni also discloses the addition of a viscosity index improver, specifically a polyalkyl (meth) acrylate, so that the kinematic viscosity of the composition is increased to at least 5.0 cSt at 100 degrees Celsius (column 6, lines 55-59; column 12, lines 24-27). It is the examiner's position that polyalkyl (meth) acrylate polymers overlap the instantly claimed polymethacrylate polymers.

The phosphorus content is disclosed as 0.02 to 0.08 percent by mass, preferably 0.05 wt% (column 2, lines 9-11; column 12, lines 50-58). Additionally, Tersigni discloses the total sulfur content of the composition derived from a sulfurized phenolic antioxidant, specifically 4,4'-thiobis(2-methyl-6-tert-butylphenol) (column 10, lines 46-56). This compound comprises 8.89 wt% of sulfur in the total compound ($\text{MW of sulfur}/\text{MW of bisphenol} = 32/360$). The antioxidant is present in the lubricating composition from 0 to 1 mass percent (column 11, lines 15-30). Therefore, the total sulfur content in the lubricating composition is from 0 to 0.089 wt%. This range clearly anticipates the instantly claimed range of 0 to 0.15.

However, Tersigni is silent as to the % Cp of the disclosed mineral oil and the molecular weight of the polymethacrylates.

Komiya discloses a lubricating composition for transmissions comprised of mineral oil, including paraffinic and naphthenic mineral oils ([0002], [0012], [0016]). The disclosed mineral oil has a kinematic viscosity of 1 to 4 mm²/s, which clearly overlaps the instant claims ([0014]). Additionally, the % Cp of the oil is disclosed as 70 or higher as defined by ASTM D 3238 ([0012]). It is the examiner's position that the transmission oils disclosed by Tersigni and Komiya both contain similar mineral oils, paraffinic and naphthenic oils at the same viscosity, and would therefore display the same characteristics. Komiya specifically uses mineral oil with a % Cp from 75 to 81 since base oil in this range of % Cp displays excellent low temperature fluidity (Table 1, page 8, [0013]). Therefore, it would have been obvious to one of ordinary skill at the time of the invention for the transmission disclosed by Tersigni to comprise a base mineral oil having a % Cp from 75-81 for the advantages of enhanced low temperature fluidity as taught by Komiya.

Yagishita discloses a lubricating composition comprising low amounts of phosphorus and sulfur ([0001], [0008], [0014]). Viscosity index improvers, specifically, polymethacrylates having a molecular weight from 5,000 to 350,000, are added to the composition to improve shear stability ([0082]-[0084]). This is an important property for transmission fluids. Therefore, it would have been obvious to one of ordinary skill at the time of the invention for Tersigni to utilize the specific polymethacrylates disclosed by Yagishita for the shear stability advantages.

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5. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick (US 6,583,092 B1) in view of Komiya (US 2001/0044389 A1).

Carrick discloses a lubricating composition comprising base oil, specifically mineral oil of the paraffinic and naphthenic type, and a specific amount of phosphorus and sulfur (column 4, lines 51-56). The total amount of phosphorus in the composition is disclosed as 0.03 or 0.035 wt% (column 3, lines 49-60) and the total amount of sulfur is 0.07 wt% (column 3, lines 17-25), which clearly overlaps the instant claims. Carrick further discloses viscosity index improvers, including polymethacrylates having a molecular weight from 20,000 to 500,000 (column 23, lines 15-30). The final lubricating composition comprises a kinematic viscosity from 5 to 16.3 mm²/s at 100 degrees Celsius, which clearly overlaps the instant claims (column 3, lines 8-11).

However, Carrick does not specifically disclose the kinematic viscosity and %Cp of the mineral oil.

Carrick discloses a final kinematic viscosity of the composition from 5 to 16.3 mm²/s at 100 degrees Celsius. This composition comprises mineral oil and a viscosity index improver up to 10 wt% (column 23, lines 54-60). Therefore, it is the examiner's position that a sufficient amount of viscosity index improver was added to the mineral oil to raise it to 5 mm²/s at 100 degrees Celsius from the initial viscosity. Therefore, absent evidence to the contrary, it would have been obvious to one of ordinary skill at the time of the invention for the initial kinematic viscosity of the mineral oil to also overlap the instant claims since a sufficient amount of viscosity index improver is added to the oil to increase the kinematic to 5 mm²/s at 100 degrees Celsius.

Komiya discloses a lubricating composition comprised of mineral oil, including paraffinic and naphthenic mineral oils ([0002], 0012], [0016]). The disclosed mineral oil has a kinematic viscosity of 1 to 4 mm²/s, which clearly overlaps the instant claims ([0014]). Additionally, the % Cp of the oil is disclosed as 70 or higher as defined by ASTM D 3238 ([0012]). It is the examiner's position that the transmission oils disclosed by Carrick and Komiya both contain similar mineral oils, paraffinic and naphthenic oils at the same viscosity, and would therefore display the same characteristics. Komiya specifically uses mineral oil with a % Cp from 75 to 81 since base oil in this range of % Cp displays excellent low temperature fluidity (Table 1, page 8, [0013]). Therefore, it would have been obvious to one of ordinary skill at the time of the invention for the transmission disclosed by Carrick to comprise a base mineral oil having a % Cp from 75-81 for the advantages of enhanced low temperature fluidity as taught by Komiya.

Response to Arguments

Applicant's arguments filed 7/5/2007 have been fully considered but they are not persuasive.

6. Specifically, applicant argues (A) that the 1.132 Affidavit filed 7/5/2007 provides criticality for the instantly claimed phosphorus and sulfur contents.

With respect to argument (A), Tersigni clearly anticipates the phosphorus and sulfur contents in claims 1 and 3 with amounts ranging from 0.05 wt% phosphorus and 0.089 wt% sulfur. Carrick clearly anticipates the phosphorus and sulfur contents in

claims 1 through 3 with amounts ranging from 0.03 or 0.035 wt% phosphorus and 0.07 wt% sulfur.

7. Specifically, applicant argues (B) the %Cp of the base oil is critical.

With respect to argument (B), it is the examiner's position that the comparative data is not found persuasive. The examples disclosed in the instant specification do not directly compare only the difference between a composition comprising the instantly claimed ranges of %Cp and compositions outside of those ranges. Comparative example 2 also comprises sulfur content more than within the claimed range. Comparative example 5 also comprises a viscosity and sulfur content not within the claimed ranges. The 1.132 Affidavit filed 7/5/2007 does not compare the %Cp of the oil utilized. Therefore, the criticality of the %Cp is not found persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy T. Lang whose telephone number is 571-272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LoAn Thanh can be reached on 571-272-4966. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

9/10/2007

ATL



LOAN H. THANH
PRIMARY EXAMINER